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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,905	05/16/2007	Ernst-Werner Wagner	30000.0002	5041

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AKERMAN SENTERFITT  
8100 BOONE BOULEVARD  
SUITE 700  
VIENNA, VA 22182-2683

EXAMINER
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CERNOCH, STEVEN MICHAEL

ART UNIT	PAPER NUMBER
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3752

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/584,905	<b>Applicant(s)</b> WAGNER, ERNST-WERNER	
	<b>Examiner</b> STEVEN CERNOCH	<b>Art Unit</b> 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 11-15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howell et al. (US Pat No 6,341,572) in view of Wagner et al. (US Pub No 2003/0226669).

Re claim 11, Howell et al. shows an inertization method for reducing the risk of fire in an enclosed protected area, in which the oxygen content in the protected area is maintained for a defined period at a control concentration below an operating concentration by feeding an oxygen-displacing gas from a primary source; wherein the control concentration and the operating concentration are lowered so far below the design concentration defined for the protected area that the growth curve of the oxygen content, reaches a limit concentration defined for the protected area only in a predefined

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time when the primary source fails (column 7, lines 66-67, column 8, lines 1-14 and lines 32-60 and column 9, lines 3-10).

Howell et al. does not show the margin between the design concentration and the operating concentration corresponding to a failure safety margin.

However, Wagner et al. does teach a failure safety margin (paragraph 0008-0023).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify prevention system of Howell et al. with the safety margin of Wagner et al. is that of a second basic level of inertion can be adjusted for extinguishing operations (paragraph 0026).

Re claims 12 and 13, Howell et al. does not show wherein the failure safety margin (ASA) is determined by taking an air change rate applicable for the protected area, including an  $ns_0$  value for the protected area, and/or the pressure differential between the protected area and the surrounding area into consideration or wherein the design concentration (AK) is lowered by a safety margin (S) to below the limit concentration (GK) defined for the protected area.

However, Wagner et al. does show wherein the failure safety margin (ASA) is determined by taking an air change rate applicable for the protected area, including an  $ns_0$  value for the protected area, and/or the pressure differential between the protected area and the surrounding area into consideration and wherein the design concentration (AK) is lowered by a safety margin (S) to below the limit concentration (GK) defined for the protected area (paragraph 0008 - 0023).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify prevention system of Howell et al. with the safety margin of Wagner et al. is that of a second basic level of inertion can be adjusted for extinguishing operations (paragraph 0026).

Re claim 14, Howell et al. does not show a detector for detecting a fire parameter, wherein the oxygen content in the protected area is lowered quickly to the control concentration upon detecting an incipient fire or a fire when the oxygen content was previously at a higher level.

However, Wagner et al. does teach a detector for detecting a fire parameter, wherein the oxygen content in the protected area is lowered quickly to the control concentration upon detecting an incipient fire or a fire when the oxygen content was previously at a higher level (paragraph 0027).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify prevention system of Howell et al. with the detection signal of Wagner et al. for an advantage in fire prevention (paragraph 0027).

Re claim 15, Howell et al. does not show wherein the control range is about +0.2% by volume oxygen content around the control concentration (RK).

However Wagner et al. does teach wherein the control range is about +0.2% by volume oxygen content around the control concentration (RK) (Fig. 4).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify prevention system of Howell et al.

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with the control range of Wagner et al. to allow the necessary concentration and volume ratios to be coordinated with the flammable materials present mainly in the areas used (paragraph 0055)

Re claim 17, Howell et al. does not show wherein the extinguishing agent for maintaining the control concentration (RK) in the protected area is calculated with respect to the air change rate of the target area, including the ns0 value of the protected area, and/or the pressure differential between the target area and the surrounding area.

However, Wagner et al. does teach wherein the extinguishing agent for maintaining the control concentration (RK) in the protected area is calculated with respect to the air change rate of the target area, including the ns0 value of the protected area, and/or the pressure differential between the target area and the surrounding area (paragraph 0013).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify prevention system of Howell et al. with formula of Wagner et al. to have the ability to conclude the necessary oxygen levels from a height ratio.

Claims 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howell et al. (US Pat No 6,341,572) in view of Wagner et al. (DE 19811851 A1).

Re claim 16, Howell et al. does not teach wherein the oxygen content in the protected area is controlled with respect to the air change rate, including the n50 value of the protected area, and/or the pressure differential between the protected area and the surrounding area.

However Wagner et al. does teach wherein the oxygen content in the protected area is controlled with respect to the air change rate, including the n50 value of the protected area, and/or the pressure differential between the protected area and the surrounding area (column 2, lines 6-68 and column 3, lines 1-8).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify prevention system of Howell et al. with oxygen content of Wagner et al. as the oxygen-expulsion inert gas containers is clearly reduced (column 2, lines 23-26).

Re claim 18, Howell et al. shows wherein the primary source is at least a machine that produces oxygen-displacing gas, a cylinder array, a buffer volume or a de-oxydation machine (column 9, lines 50-67 and column 10, lines 1-35).

### ***Response to Arguments***

Applicant's arguments filed 5/19/2009 have been fully considered but they are not persuasive. With all due respect, regarding applicant's arguments that Howell et al. clearly does not teach a person skilled in the art to reduce the oxidant content at a level which is much lower than the oxygen content which corresponds to the limit concentration, no such limitation is claimed nor disclosed in the current application. Regarding applicant's argument that Howell et al. is completely silent with respect to a case when the exhaust/vent system fails and no inert gas can be supplied to the enclosed area, the examiner would like to direct attention to specifically column 8, lines 56-60 which explicitly states that "an inert gas bypass line 68 is connected with the supply line and is controlled by a throttle valve 70 to enable continuation of the inert gas

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supply even in circumstances where the control equipment of the supply line is in need of service," for example as in the case of a system failure. The examiner maintains his rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEVEN CERNOCH whose telephone number is (571)270-3540. The examiner can normally be reached on IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571)272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. C./

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/Len Tran/

Supervisory Patent Examiner, Art Unit 3752